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Oceans and seas

Report of the Secretary-General

Addendum

Trends in national implementation

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I. Introduction

1. In its decision 6/5, the Commission on Sustainable Development encouraged Governments to continue providing voluntary national communications or reports on the implementation of Agenda 21 at the national level. The Commission also requested the Secretariat to process and compile, on a sectoral basis, the information provided by Governments in accordance with the issues contained in its multi-year programme of work.[1]

2. In response, the present addendum was prepared by the National Information Analysis Unit of the Division for Sustainable Development. It examines the progress made towards sustainable development within oceans and seas based on the information that Governments have provided in their national reports to the Commission. The overall implementation of chapter 17 of Agenda 21 is discussed in the report of the Secretary-General on oceans and seas (E/CN.17/1999/4).

3. Of the 109 countries that have submitted national reports to the Commission, 92 countries had reported on oceans by end-January 1999. Seventy-one per cent of those countries provided information to the Commission at its fifth session, in 1997, 7 per cent to the Commission at its sixth session in 1998, and 22 per cent to the Commission at its seventh session in 1999. Reporting countries are listed in the annex.

4. Consistent with Agenda 21 programme areas on oceans, the present addendum focuses on national progress as reported, in particular:

(a) Integrated coastal zone management that strives to prevent degradation and erosion of coastal environment;

(b) Marine environment protection, with particular emphasis on prevention of pollution from both land and sea-based sources;

(c) Sustainable use and conservation of marine living resources where the major problems are related to expanded fisheries, and endangered and fragile species and ecosystems.

5. As a follow-up to Agenda 21, oceans have been discussed at the fourth (see E/CN.17/1996/3 and 38) and fifth (see E/CN.17/1997/2/Add.16) sessions of the Commission on Sustainable Development, as well as at the nineteenth special session of the General Assembly (see Assembly resolution S-19/2). In addition, the implementation of the Convention on the Law of the Sea is regularly discussed in the General Assembly (see, for example, A/53/456).

II. National progress towards sustainable development

General achievements, changes and trends

6. According to the national reports, major achievements within the last few years focus on the improvement of decision-making. Progress has been made in particular in:

(a) Strengthening the legal and administrative frameworks;

(b) Increasing focus on respecting the rights of indigenous and local people;

(c) Improving information for decision-making and public awareness, including the development of indicators and efforts to value coastal and maritime resources and biological diversity;

(d) Using financial incentives that promote sustainability, such as waste-water charges, recycling incentives, tax exemptions for investment in energy-saving equipment and environmentally sound technology, fees for natural resources use and oil pollution, award systems where clean ships pay lower harbour taxes, and carbon dioxide (CO_2) and energy taxes on fossil fuels;

(e) Increasing collaboration at international, regional and bilateral levels.

Integrated coastal zone management

7. Developments in integrated coastal zone management can be highlighted as:

(a) Revision of national coastal management systems, with emphasis on local implementation;

(b) Increasing efforts towards coordinated planning and management, taking into account the interlinkages between the different sectors;

(c) Development and implementation of cooperative programmes, emphasizing in particular the participation of local and young people;

(d) Development and use of environmental codes of practices and standards, especially for water quality, drainage, dredging, use of chemicals and construction along the coast.

Marine environment protection

8. Major achievements in marine environment protection include the following:

(a) Implementation of the polluter pays and precautionary principles through revised and strengthened regulatory frameworks;

(b) Commitment of many countries to phase out the dumping of sewage sludge at sea;

(c) Development of infrastructure and capacity to treat oil spills;

(d) Development and use of financial incentives to promote the conservation and sustainable management of coastal environment and to prevent marine pollution;

(e) Establishment of marine protected areas;

(f) Wide regional and international collaboration to protect the marine environment, both through legally binding instruments and voluntary recommendations and codes of practices.

Sustainable use and conservation of marine living resources

Fish stocks

9. Many international and regional activities are under way in relation to the sustainable use and conservation of marine living resources, especially fish stocks (for further information, see, for example, A/53/456). The fisheries sector is highly regulated and guided through international, regional and bilateral agreements, and intergovernmental and regional organizations and commissions. That may be one reason why countries have provided relatively little information on sustainable fisheries to the Commission.

10. Despite a range of international and regional commitments and efforts, demand for and pressure on living marine resources continues to grow. For example, according to Food and Agriculture Organization of the United Nations (FAO) data, some 60 to 70 per cent of

fishery stock worldwide requires urgent intervention to control or reduce fishing to avoid further decline.

11. The main national activities to combat problems related to expanded fisheries include:

(a) A shift from deep-sea fishing to aquaculture (although this in turn creates other, mainly environmental, problems);

(b) The development of annual fisheries management plans and establishment of quota systems;

(c) Increased use of traditional knowledge in fishing methods;

(d) The development and implementation of codes of practice both nationally and in international cooperation, e.g., the FAO Code of Conduct on Responsible Fishing.

Other marine living resources

12. Countries provided little information on their activities for the conservation of marine mammals and marine living resources other than fish. A few countries reported the presence of specific programmes or projects for the conservation of endangered species, such as sea turtles, manatees, whales and dolphins and aquatic bird life. Compliance with the International Coral Reef Initiative (ICRI) was a major factor in this area.

III. Regional trends

Methodology and regions

13. Countries in different parts of the world show significant differences in implementing the oceans-related issues of Agenda 21. The present section summarizes, by region and by sea, the main priorities and challenges, developments in decision-making, and activities at the national level to promote integrated coastal zone management, marine environment protection, and sustainable use and conservation of marine living resources. All descriptions are compiled on the basis of the national information on oceans provided to the Commission by end-January 1999.

14. Regions include:[2]

Africa

Central East Atlantic (West and Central Africa), West Indian Ocean (Eastern African Region) and South Africa

Africa and Asia

Persian Gulf, Red Sea and Gulf of Aden

Asia

Aral Sea, North Indian Ocean (South Asian Seas), North-West Pacific, China,[3] South Pacific, and West Pacific and East Indian Ocean (East Asian Seas)

Europe

Baltic Sea, Black Sea, Russian Federation,[3] and North-East Atlantic and North Sea

Mediterranean

South, Central and North America

South-West Atlantic, Wider Caribbean and South-East Pacific, Canada,[3] and the United States.[3]

15. Regional descriptions are indicative only, since:

(a) Not all countries of the region have reported to the Commission on issues related to chapter 17 of Agenda 21;

(b) The amount and quality of information in the individual reports vary significantly.

A. Africa

Central East Atlantic (West and Central Africa)

16. The following nations along the Central East Atlantic coast have submitted information on oceans to the Commission: Benin (97), Cameroon (97), Côte d'Ivoire (99), Gambia (98), Guinea-Bissau (97), Nigeria (97), Sao Tome and Principe (97) and Senegal (97). Those that have not include: Angola, Cape Verde, Congo, Equatorial Guinea, Gabon, Ghana, Guinea, Liberia, Mauritania, Namibia, Sierra Leone and Togo.

17. Among the main concerns in the region are unsustainable exploitation and environmental degradation of those natural resources on which rural communities depend; optimized use of land; living conditions of coastal people; insufficiently treated urban wastes, oil pollution and coastal erosion. Key needs are related to the establishment and strengthening of a regulatory framework, institutional capacity and coordination, especially in relationship to oil spill management; rehabilitation of marine transport and port activities; and improvement of information, particularly on water quality. A few countries are also concerned about the negative impacts of tourism, such as increasing pollution and endangering fragile ecosystems.

18. Half of the countries have national oceans policies. Strategies for managing wastewater are common, but inappropriate technology and insufficient infrastructure hamper implementation. Most countries have identified elements of coastal zone management but have not yet succeeded in integrating those elements into a coherent programme. As a result, the marine environment continues to deteriorate, and its resources come under greater pressure.

19. Regional, international and bilateral cooperation is important. The West and Central Africa Action Plan (1981), in particular, supports the protection of marine environment and coastal zones.

West Indian Ocean (Eastern African region)

20. Madagascar (97), Mauritius (97) and the United Republic of Tanzania (97) have provided national information on oceans to the Commission. The following nations within the region have not provided information: Comoros, Kenya, Mozambique, Seychelles and Somalia.

21. Priority areas and future challenges are related to development of coastal management, contingency planning to combat marine pollution, pollution monitoring, prevention of coastal erosion, development of transportation in tourist resort areas, prevention of near-

shore water pollution, and making inventories of coral reef ecosystems to be able to protect them.

22. Countries in the region are developing policies and programmes on ocean affairs, especially for coastal management and protection of the marine environment, and they are revising legislation on those issues as well as on fisheries. New legislation emphasizes community-based conservation through the involvement of local people. Steps have been taken to improve communication networks, planning, training and technology for disaster preparedness, exchange and dissemination of information and databases.

23. Cooperation in the region takes place through the Indian Ocean Commission's Environmental Programme and through the Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (1985).

South Africa (97 and 99)

24. South Africa has begun to address problems of policy and legislative fragmentation by initiating integrated coastal zone management, along with a programme called CoastCARE, a broad-based information exchange, public awareness and education initiative that addresses issues pertaining to integrated coastal management. Policies have been developed on pollution and waste management and minimization, and cleaner technology.

25. Diamonds are mined on the sea coast and seabed along northern parts of the West Coast, resulting in degradation of the coastal and marine ecosystems. Mining companies are now implementing programmes to rehabilitate affected areas. Offshore oil and gas exploration also results in disturbance and degradation of marine communities. As the tourism industry grows, efforts are under way to promote sustainable tourism.

26. Special protection is afforded to coral reefs and various estuarine mangrove forests.

27. South Africa is currently exploring the possibility of accession to the Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region and its related Protocol (Abidjan Convention).

Landlocked States

28. Although landlocked, Niger (97), Uganda (97) and Zimbabwe (97) informed the Commission on Sustainable Development that they have ratified the Convention on the Law of the Sea and participate in regional cooperation. Zimbabwe is also a member of the Port Management Authority for Eastern and Southern Africa, which conducts dialogues between landlocked and coastal States.

B. Africa and Western Asia

Persian Gulf, Red Sea and Gulf of Aden

29. Bahrain (97), Egypt (97), Qatar (97) and Saudi Arabia (97) have all provided national information on oceans to the Commission. The following nations within the region have not provided information: United Arab Emirates, Eritrea, Iraq, Iran (Islamic Republic of), Jordan, Kuwait, Oman, Somalia, Sudan and Yemen.

30. The region's priority is the reinforcement of emergency preparedness to fight oil spills and measures to reinforce implementation of international and national laws through, for

example, deterrent fines and punishment for wilful polluters, backed up with a programme of environmental awareness and education.

31. Waste-water problems have grown as a result of the development of industries and human settlements along the coast. Due to recent efforts, the discharge of untreated wastewater has been reduced through the expansion of sewage systems, the installation of treatment plants and the improvement of existing treatment facilities and regulations for industrial effluents. Monitoring programmes are being developed.

32. Shortage of land for development has lead to the reclamation of land from seas. Dredging operations — in some cases illegal — have in turn caused environmental damage to the marine environment, in particular to fragile ecosystems. Recently, more attention has been given to the environmentally sound management of such activities, and decision-making has become more participatory.

33. Other sustainable development activities include development of artificial coral reefs, replanting of mangroves, mapping of the distribution of ecologically important marine and coastal habitats and potential protected areas, and research, particularly related to climate change. There are also various pilot activities related to sustainable tourism and eco-tourism, especially in the Red Sea region.

34. Regional cooperation is seen as one of the major engines to bring sustainable development issues to the national political agenda and legislation. It focuses largely on combating and controlling oil pollution. Both the Kuwait Action Plan (1978) on the Persian Gulf Region and the Red Sea and Gulf of Aden Action Plan (1982) exist in the region.

C. Asia

Aral Sea

35. The Aral Sea is bordered by Kazakhstan (97) and Uzbekistan (97). The main marine and coastal problems of the region are unsustainable use of resources, environmental degradation of the water sheds, deforestation, soil erosion, increasing vulnerability to large-scale landslides, destruction of wetlands, and the increasing poverty and health problems of people living in the deltas of Syr Darya and Amu Darya rivers. As a result of heavy use of those rivers, primarily for farm irrigation, the flow of the rivers has gradually declined, ceasing entirely by the end of the 1980s. As a result, the volume, level and surface area of the Aral Sea decreased considerably — the surface area reduced to half its original size. Consequently, the Aral Sea has lost its importance for fisheries, recreation and transport.

36. Although work on the rational use of water resources is already producing results, the restoration of the Aral Sea will require both radically altered economic structures with a shift towards sectors that are not water-intensive and the total exclusion of farm irrigation.

37. When describing activities to promote sustainable water and coastal management, both Kazakhstan and Uzbekistan noted the importance of regional cooperation, including the Aral Sea Basin Programme (1994), which serves as an umbrella for regional cooperation on developing sustainable water and land management strategies; an inter-state[4] water management coordination commission, which regulates the use and release of the rivers' waters; and the International Fund to Save the Aral Sea, managed in collaboration with World Bank and the United Nations Development Programme (UNDP). The international conference on the Aral Sea crisis, convened by the United Nations in 1995, adopted a decision to draft an international convention on the sustainable development of the Aral Sea Basin, and created the Regional Commission on Sustainable Development.

North Indian Ocean (South Asian seas)

38. Bangladesh (97), India (97), Pakistan (97) and Sri Lanka (97) have provided national information on oceans to the Commission on Sustainable Development. Maldives, which also belongs to the region, has not.

39. One of the major priorities in the region is responding to the stress on the coastal marine environment caused by economic and industrial development, coupled with population increase. One major problem is insufficient sewage systems. Wastes generated from coastal cities and industries are disposed, often as untreated sewage, either directly into the sea or through rivers and creeks. Attempts are being made to install waste treatment plants. Further efforts are clearly needed to train personnel to monitor and control pollution, develop systematic assessments, design new industrial machinery that would minimize waste production, and develop waste-water treatment and waste-reception facilities.

40. Another major problem is dumping of oil and garbage from vessels. Steps to solve that problem include strengthening the infrastructure and monitoring of marine pollution, and developing contingency plans to deal with oil spill disasters.

41. The fisheries industry is relatively important to the economy within the region, and thus the integration of sustainability principles into the industry, particularly aquaculture, remains one of the main future challenges. Regulations have been developed especially to control the waste discharged from shrimp farms, prevent overfishing and monitor fishing. However, some fish species continue to be threatened by indiscriminate fishing.

42. Numerous small islands along the coastal zone have a unique tropical ecosystem, with diversity, wild life and natural beauty. The biotic conditions and the climate of the islands are congenial to high productivity, with rich natural and planted mangrove ecosystems and coral reefs. Industrial development and activities along the coastlines of the islands are being regulated to prohibit environmentally destructive activities, including mining of corals. Eco-friendly technologies are also promoted.

43. The South Asian Seas Action Plan (1995) emphasizes consultations, networking and technical cooperation. A training programme for integrated coastal zone management for protected areas has recently been completed.

North-West Pacific

44. Japan (97, 99), the Republic of Korea (97, 99), the Russian Federation (97, 99) and China (97) have provided national information on oceans to the Commission. China, which is a member of both this and the West Pacific and East Indian Ocean programmes, is reviewed separately below. The Russian Federation, which participates in several regional groups, is discussed separately under "Europe". The Democratic Republic of Korea has not reported.

45. The competitive use of coastal areas — and consequently the disappearance of natural coastline — and worsening marine pollution particularly threaten the region. The main future challenges include implementing of control and total allowance catch systems within fisheries; preventing and resolving stakeholders' conflicts; encouraging participation in decision-making; and reinforcing regional and international cooperation to effectively protect and preserve the marine ecosystem and resources.

46. Programmes and action plans concentrate on marine pollution prevention and control of oil spills, as well as on the management and protection of coastal environment, including fragile ecosystems. Steps to develop and strengthen marine resource management include both national and local plans (e.g., master plans) for conservation of marine living resources

and development of rational fisheries. Production of marine aquaculture has significantly increased in the region.

47. Extensive research is undertaken in the region, especially related to marine pollution, environmental restoration, fisheries management, climate change and safe navigation. Examples of technology development include fishing gear and methods that are both energy-saving and protective of resources, turbine engines with low nitrogen oxide emissions, oil and gas recovery systems, an offshore floating wave power device, new tankers, and oceanic energy generation systems.

48. Regional cooperation includes the North-West Pacific Action Plan (1994) and the East Asian Seas Action Plan (1981).

West Pacific and East Indian Ocean (East Asian seas)

49. Australia (97), Brunei Darussalam (99), China (97), Indonesia (97), Philippines (97), the Republic of Korea (97, 99) and Thailand (97) have provided national information on oceans to the Commission on Sustainable Development. Cambodia, Malaysia, Singapore and Viet Nam have not. Information from Australia is reflected largely under the South Pacific region, the Republic of Korea under the North-West Pacific region and China, independently, below.

50. The key interests of the region focus on elaboration of comprehensive oceans policies and plans; integrated coastal zone management, including coastal community development initiatives; sustainable fisheries; and better monitoring and protection of coastal and marine environments. Emphasis is given to prevention of coastal erosion; management and conservation of marine resources, particularly the straddling fish stocks and highly migratory fish stocks; and cleaning beaches, regeneration of mangroves, and protection and rehabilitation of coral reefs to cover damages from overexploitation of living coral sites.

51. In the last 30 years, the rapid development of industrial complexes and new urban centres in coastal areas has made the disposal of industrial water effluents and sewage an urgent issue. Recognizing the impacts on land-based resources of pollution in marine and coastal areas, countries are developing programmes to minimize and prevent pollution. Another major concern is climate change and its potential impact, both on sea level rise and as a consequence on the biodiversity of ecologically fragile small islands.

52. Parts of the region are also concerned about increased mineral loading in marine estuaries from upstream, intensive paddy cultivation and the conversion of intertidal zones (i.e., salt marsh and mangrove) to rice paddy. The exploitation and transportation of oil and gas also pose significant potential problems for marine resource conservation.

53. Efforts are under way to strengthen law enforcement and monitoring to stop illegal discharge of wastes into the sea. Relatively weak control in some parts of the region creates problems in dealing with frequent violations, such as disposal of toxic and hazardous waste and trespassing in the catchment zone. Countries are responding to this problem by creating national maritime environment monitoring networks, information service systems and databases.

54. Cooperation in the region is furthered by participation in the East Asian Seas Action Plan[5] (1981) and the Association of South-East Asian Nations (ASEAN).

China

55. China (97) is emphasizing the creation of domestic law consistent with international maritime laws. The national ocean Agenda 21 and action plan were released in 1996. These became the action framework for the exploration and protection of maritime resources, the improvement of the polluted marine environment, and the implementation of sustainable development.

56. China has vast maritime space, a long coastline and rich marine resources. The marine industry is a growing area of economic development. China has therefore taken steps to further develop marine resource management and environmental protection in an integrated manner. Among the actions taken have been the establishment of an oceanic zoning system, national and regional plans for oceanic exploration, and a licensing system for waste discharge into the sea. Sewage disposal facilities, and emergency and monitoring facilities for oil spills are required in maritime petroleum exploring.

57. China has a number of sea islands as experimental areas for rational exploration and utilization of resources. Benefits have been achieved, such as in the development and promotion of floating raft aquaculture projects and seabed sowing technology. Key technology research areas include: utilization of coastal resources and environment, utilization of sea-water resources and oceanic energy generation.

58. China participates in the East Asian Seas Action Plan (1981) and the North-West Pacific Action Plan (1994).

South Pacific

59. Australia (97), Fiji (97)[6] and New Zealand (97, 99) have provided national information on oceans to the Commission on Sustainable Development. The following nations within the region have not provided information: Federated States of Micronesia, Marshall Islands, Palau, Papua New Guinea, Solomon Islands and Vanuatu.

60. The key interests within the region are the elaboration of comprehensive oceans and coastal policies, protection of marine environment and sustainable fisheries. The most frequently repeated environmental concerns are toxic algae blooms, introduction of alien species and issues related to climate change.

61. The ocean policies of Australia and New Zealand are clearly directed toward enhancement of sustainability. Administration is often highly decentralized, leading to the formulation of regional and local coastal policies. Countries are also developing industrial codes of practice, e.g., for aquaculture, recreational fishing and tourism. Various plans and projects focus on the protection of mangroves, coral reefs and sea birds, and restoration of damaged deltas. New Zealand provided a variety of examples on technology innovations, including the use of wool booms in residual oil spill clean-ups, oil-eating microbes, development of captive breeding programmes for shellfish, experimental wave and tidal energy generation, and development of pharmaceutical and natural health products from marine sources, such as sponges.

62. Fisheries policies and legislation have recently been revised, taking into account the concept of ecologically sustainable development and an ecosystem-based approach, greater stakeholder involvement in decision-making, and the consolidation of the quota management system as the primary means of controlling fishing. New policy frameworks also recognize indigenous fishing rights.

63. The South Pacific Action Plan (1982) provides a basis for cooperation in the region. Australia also participates in the East Asian Seas Action Plan. Other regional conventions

or forums include the Convention on the Prohibition of Fishing with Long Drift Nets in the South Pacific, and the Asia Pacific Economic Cooperation (APEC) Marine Resources Conservation Working Group. An example of the numerous bilateral cooperation activities within the region is the memorandum of understanding between Australia and New Zealand to facilitate cooperation and assistance in the event of a marine pollution incident affecting the Tasman Sea.

D. Europe

Baltic Sea

64. The following countries that border the Baltic Sea have submitted national information on oceans to the Commission: Denmark (97), Estonia (99), Finland (97, 99), Germany (97, 99), Lithuania (97, 99), Poland (97), the Russian Federation (97, 99) and Sweden (97, 99). Latvia has not submitted information. The Russian Federation is discussed separately below.

65. The main concern of the region is the restoration of the ecological balance of the Baltic Sea. Activities focus on the improvement of contaminated watercourses, polluted especially by heavy metals, nitrogen and phosphorus, mainly from agriculture, industry and transportation, and prevention of further eutrophication. In the Baltic States and Poland, the completion of construction of waste-water treatment facilities should help to improve the state of the Baltic Sea in the near future. Priority has also been given to the conservation and enhancement of biodiversity, as well as the cultural and recreational assets of the region.

66. National policies, strategies, major programmes and legislation have been recently revised to comply with international agreements. In the Baltic States and Poland, some work is still going on as countries harmonize their national regulatory framework according to the European Community (EC). Individual sectors of society are responsible for their own environmental performance, usually under the guidance and supervision of environmental authorities. Various projects as well as local (master) plans support the management of coastal zones in an integrated way.

67. Economic incentives play an important role in promoting sustainable development activities, especially in the non-EC member countries of the region, in particular in reducing discharges of sewage into inland waters and thus to the Baltic Sea.

68. Fisheries policies are largely defined by membership in the EC. The EC Common Fisheries Policy has common fishing regulations, including total allowable catch, quota systems and technical measures. Surveillance systems, including the use of geographic information systems (GIS), exist to monitor the implementation of fisheries legislation.

69. All countries stressed the importance of regional cooperation, particularly through the Helsinki Commission, which is the governing body of the Convention on the Protection of the Marine Environment of the Baltic Sea Area (1974, 1992); through the implementation of the regional Baltic 21 sustainable development programme and its specific sectoral programmes; and through various bilateral programmes and projects.

Black Sea

70. The Black Sea is bordered by Bulgaria (97), Georgia (99), Romania (97, 99), the Russian Federation (97, 99), Turkey (97) and Ukraine (97). The Russian Federation is discussed separately.

71. The main concerns of the region are the degradation of the ecosystem, especially through eutrophication; unsustainable use of natural resources; decline in commercial fish

stocks; and insufficiently treated sewage, which threatens public health and may pose a barrier to the development of sustainable tourism and aquaculture.

72. The major challenges of the region are to secure a healthy sea environment at a time when economic recovery is being pursued; completion of effective regulatory and institutional frameworks, particularly for integrated coastal zone management and sustainable fisheries; and enhancement of public awareness and cooperation between stakeholders.

73. National marine strategies and policies have recently been formulated or are under development. Countries have concentrated their programmes on ecological improvement of rivers adjacent to the sea, conservation of biodiversity, and intervention in case of accidental oil pollution. Support is needed for monitoring, although basic surveillance systems exist, and GIS is being introduced in some countries. The Governments of the region are establishing norms and standards to prevent overfishing. Fishing is generally regulated by a quota system.

74. Regional cooperation largely takes place through the Black Sea Strategic Action Plan (1996) and the European Community's PHARE[7] and TACIS[8] programmes.

Russian Federation

75. The major concerns of the Russian Federation (97, 99) are the recently established state marine boundaries (changing geopolitical situation), a worsening economic situation, increasing international competition for property rights on ocean zones and resources, and absence of a mechanism for interregional and intersectoral coordination in oceanic projects.

76. The Russian Federation adopted a strategy on oceans in 1998, with plans to implement it in three stages: settlement of disputes on marine state boundaries, extraction of mineral resources on an industrial scale, and improvement of trade relations and equal opportunities on the international market. The Russian Federation developed a programme for the development of the fishing industry, and it respects international agreements in its fishery management. Integrated coastal zone management programmes have been developed for the Caspian Sea and the Black and Azov Seas.

77. Several examples were given on research and technology activities, such as new methods of marine forecasting (e.g., the sea level of the Caspian Sea), marine information systems, and research in the Arctic and Antarctic.

78. Cooperation focuses primarily on the optimal use and conservation of common or interlinked fish stocks with neighbouring countries with which Russia is linked by long-term common interests. Russia is expanding regional cooperation in the Black and Azov Seas, and in the Caspian, Baltic, Japan and Bering Seas. The Russian Federation participates in the Black Sea and North-West Pacific Action Plans, as well as the Baltic 21 action programme.

North-East Atlantic and North Sea

79. Belgium (97, 99), Denmark (97), France (97), Germany (97, 99), Iceland (97), Ireland (97), the Netherlands (97), Norway (97), Portugal (97) Spain (97) Sweden (97, 99) and the United Kingdom (98) have provided national information on oceans to the Commission.

80. The main emphasis within the region is on the protection of the marine environment, especially in the North Sea; sustainable utilization of fish stocks; conservation of biodiversity, cultural heritage and landscape; improvement of scientific knowledge of the marine ecosystems; sustainable tourism; public awareness-raising; and clarification of

interests and areas of conflict between different sectors. The main challenges include taking corrective action to rehabilitate damaged areas, and prevention of further eutrophication and negative impacts caused by hazardous substances and nutrients. Oil spills and alien species from foreign vessels were also listed among the major threats.

81. Almost all of the countries have established an ocean policy that is incorporated into the national sustainable development strategy

82. Best environmental practices and best available technologies are widely applied to manage resources sustainably and to reduce polluting effluents. Tight legislation has stopped direct discharges. As in the Baltic Sea region, economic incentives play an important role in promoting sustainable development.

83. Fisheries are highly regulated throughout the region by quota and total allowable catch systems. For EU members, the Common Fisheries Policy provides a framework for sustainable fisheries management.

84. The Oslo and Paris Commissions of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) form the basis for regional cooperation. Examples of subregional cooperation include the Nordic Action Plan against Pollution of the Sea and the Trilateral Wadden Sea Cooperation for the protection of fragile coastal intertidal muds in Denmark, Germany and the Netherlands.

Landlocked States

85. Although they are landlocked, Austria (97), Hungary (97), the former Yugoslav Republic of Macedonia (97) and Switzerland (97) have all submitted information on oceans to the Commission. Austria and Hungary have ratified the Convention on the Law of the Sea, and Switzerland has signed it. Switzerland is conducting activities to reduce the flow of nutrients and toxic chemicals to the Nordic Sea, and it is working to improve technology in industries along the Rhine River. It also participates in regional and international programmes to protect the Nordic Sea.

E. Mediterranean

86. The following nations that border the Mediterranean have submitted information on oceans to the Commission: Albania (97), Algeria (97), Croatia (97), Egypt (97), Greece (97, 99), France (97), Israel (97), Italy (97), Lebanon (97), Monaco (97, 99) Morocco (97), Slovenia (97), Spain (97), Syria (97), Tunisia (97) and Turkey (97). Bosnia and Herzegovina, Cyprus, the Libyan Arab Jamahiriya and Malta have not provided information.

87. The region is largely concerned with oil pollution, wastewater and biological diversity. African and Eastern European countries also emphasized the need for capacity-building, mobilization of human resources in the public sector, preparation of operative coastal and marine plans, improvement of human settlements in coastal areas, and the need for technology assistance, especially to combat oil pollution and improve water quality.

88. For years, the Mediterranean region has combated accidental oil pollution. Some African countries report that due to numerous oil storage facilities located along the coastline, pollution is significantly higher in that part of the region and constitutes a major environmental threat. National emergency plans, infrastructure and installations for reception of oil and chemical residues from ships have been developed, and modern cleaning methods, such as oil-eating bacteria, are used in case of accidents. Most countries also have adequate surveillance systems.

89. Wastewater is another major problem within the region. Although financial incentives and rigorous water quality standards are widely applied and much of the wastewater in the region is treated, problems still exist. On the South and East coasts, densely populated settlements with often inadequate sewage services are causing major negative impacts on the marine environment.

90. Regional, subregional and bilateral collaboration play an important role in the protection of the Mediterranean, and it is conducted within the framework of various regional and international agreements. The main forum is the Mediterranean Action Plan (1975). An example of subregional cooperation is the France-Monaco-Italy agreement to combat pollution and conservation of marine quality in coastal zones. The European Community also plays an active role in this area.

F. South, Central and North America

South-West Atlantic

91. Argentina (97) and Brazil (97) have both provided national information on oceans to the Commission. Uruguay also belongs to the region but has not provided information.

92. Among the main future challenges of the region are the improvement of both the sanitation systems and the fisheries along the coastline.

93. In Argentina, research is being undertaken in a number of areas to address those problems, including studies on algae, the risk of coastal erosion and ocean currents.

94. Brazil has adopted an integrated coastal strategy which addresses, *inter alia*, land use and zoning, pollution control, natural resource assessment, capacity-building, identification of critical spots and contingency plans. A federal bill on fisheries is being drafted. A number of projects aim at protecting endangered species, such as sea tortoises, manatees, whales and dolphins, and aquatic bird life.

95. The South-West Atlantic Action Plan was adopted in 1996. In addition, a regional project co-sponsored by the Global Environment Facility (GEF) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) is being implemented on the preservation of marine biodiversity and coastal wetlands.

Wider Caribbean region and South-East Pacific (Central America)

96. The following countries have submitted information on oceans to the Commission: Antigua and Barbuda (98), Bahamas (97, 98), Barbados (97, 98), Colombia (97), Costa Rica (97), Cuba (97, 98, 99), Ecuador (97, 99), Guyana (98), Haiti (97), Jamaica (98), Mexico (97, 99), Nicaragua (99), Panama (97), Suriname (97) and Venezuela (97). Within the region, Belize, Chile, Dominica, the Dominican Republic, El Salvador, Grenada, Guatemala, Honduras, Peru, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Trinidad and Tobago have not provided information to the Commission.

97. The main concern in the region is climate change and related issues, such as the potential effect on the strength and frequency of hurricane activity, and the increased likelihood of flooding, drought, erosion and salt water intrusion, impacts on human health, and threats to the economy, particularly tourism. Plans and guidelines for adaptation to sea level rise are being developed, but often countries do not have the funds to support the necessary measures. The countries in the region have also taken steps to develop disaster preparedness policies.

98. The other major problem is marine pollution. Although in general the water quality in the region is good, insufficient waste-water treatment and increased shrimp farming have caused environmental damage, especially in highly populated parts of the region. Current activities include rehabilitation of contaminated bays and efforts to access technology to allow scientific evaluation of marine pollution. Most countries have adopted emergency plans for accidental oil pollution at sea. Protection of coral reefs and natural beaches, particularly in small islands, and protection and rehabilitation of mangroves are issues that are addressed in various national and local projects but for which further international cooperation is also needed.

99. Losses in biodiversity and economic growth due to unplanned activities related to dredging, lack of clear property rights and control on natural resources, the low level of investments, and lack of participation in decision-making are conditions that have brought integrated coastal zone management onto the political agenda, and programmes are gradually being developed.

100. The existence of ocean policies, legislation, plans and programmes that reflect sustainability varies considerably throughout the region. The majority of countries, however, have developed or are developing ocean policies and plans, with the intention of integrating them into national sustainable development strategies. Most have also established standards to enhance sustainable tourism. Governments are collaborating with tourist agencies, the hotel industry and other related industries to develop standards for water sports (diving), cultural heritage, nature attractions, other tourist sites and marine transports.

101. Many countries reported that although the importance of the fisheries industry in their national economies is increasing, the use of living marine resources is not sustainable. However, legislation is being revised, and a number of projects have been undertaken to optimize yield, while not endangering future harvesting of fish stock and other species. A number of countries in the region have tightened standards, control and monitoring, and have established quota systems. Measures have also been taken to reduce the by-catch of dolphins and marine turtles when catching tuna. Aquaculture, especially shrimp farming, has rapidly expanded. Further control is needed to avoid disturbance to ecosystems, such as mangroves and estuaries.

102. The countries within the region cooperate through the Caribbean Action Plan (1981), the South-East Pacific Action Plan (1981) for Central America, and various other regional and subregional activities, such as projects on Caribbean planning for adaptation to climate change, a project on highly contaminated bays, and studies on El Niño.

Canada

103. Canada (97) emphasized the conservation and sustainable utilization of fishery resources, and the rights of aboriginal people. The major interests at the international level are the prevention of marine pollution from land-based sources and pollution by dumping of waste, protection of the sensitive environment of the Arctic Ocean, and exchange of scientific information on the oceans and its living resources.

104. Ocean-related policies and national and local programmes of action on coastal management take an ecosystem approach. Canada passed an Oceans Act in 1996, and is developing an oceans management strategy and an action programme for the protection of the marine environment from land-based activities. Aboriginal people are gaining greater control over specific management issues in some regions, particularly in northern Canada.

105. Stock conservation problems, allocation conflicts between user groups, international transboundary disputes, excessive harvesting capacity and fiscal restraint have combined

to encourage the federal Government to pursue a strategy to advance industry restructuring and to introduce changes to fisheries policies and management practices. The objective of those changes is an economically and environmentally sustainable fishing sector, taking into account conservation, aboriginal rights, balanced industry capacity with sustainable carrying capacity, and partnership between government and industry.

106. Examples of Canadian cooperation activities include a joint marine contingency plan with the United States for responding to spills in shared boundary waters, and the Arctic Council.

United States

107. The United States (97) emphasized marine environmental protection, land-based sources of marine pollution, hazardous waste management, research and exchange of information on climate change, prevention of oil spills, and the overall promotion of sustainable development of freshwater, coastal and marine resources.

108. The United States has a national policy on oceans as well as an integrated coastal area management programme that promote the sustainable development of freshwater, coastal and marine resources.

109. The United States participates in the Caribbean Action Plan and the South Pacific Action Plan. It supports various global and international initiatives, and emphasizes the importance of global cooperation. The United States has a joint marine contingency plan with Canada for responding to spills in shared boundary waters.

IV. Primary marine pollution sources and uses of coastal areas, by region

110. The table summarizes regional information on the primary sources of land-based pollution, primary sources of sea-based pollution and major uses of coastal areas. Like all other discussion in the present addendum, the information is based solely on the national reports that Governments have chosen to submit to the Commission.

Main marine pollution sources and uses of coastal areas, by region

	Main land-based pollution sources	*Main sea-based pollution sources*	*Major uses of coastal areas*
Aral Sea	No information available	No information available	No information available
Baltic Sea	Agriculture, transport, industry (in Baltic States: waste water from population centres)	Legal and illegal oil discharges, garbage from vessels, air pollution	Major population centres, fishing, shipping, agriculture, industry, summer houses, recreation mining, tourism, nature conservation
Black Sea	Municipal sewage, agriculture, industry, erosion	Oil exploitation, shipping, harbour activities, oil spills	Major population centres, fishing, tourism, petrol exploitation and processing, industry
Central East Atlantic (West and Central Africa)	Waste water, solid waste	Ballast water, oil spills	Population centres, economic development zone fishing, oil exploitation, tourism
Mediterranean	Sewage (treated or untreated), industrial effluents. In recent years, the situation has been significantly improved	Accidental oil spills and illegal discharges from ships	Major population centres, industry, tourism, fishing
North-East Atlantic and North Sea	Industrial effluents, agriculture, transportation. The North Sea is seriously affected by waste water from industry and urban settlements	Legal and illegal oil discharges, dumping of wastes	Major population centres, tourism, agriculture, industry, fishing, nature conservation
North Indian Ocean (South Asian Seas)	Pesticides from agriculture; waste waters from industries, thermal pollution, tarballs and plastic and toxic effluents, including heavy metal	Oil spills and dumping	Major population centres (often thickly polluted)
North-West Pacific	Sewage, industrial effluents, dumping	Oil spills, aquaculture, dredging	Major population centres, industries, fishing, ports, leisure, location of electric power plants
Persian Gulf, Red Sea and Gulf of Aden	Treated and untreated sewage, industrial effluents and irrigation drainage water	Oil spills	Urban centres
South Pacific	Agriculture, sewage mostly treated, industrial discharge, dumping of spoil and rubbish	Oil spills	Major population centres, fishing, recreation, tourism, mining, oil exploration and industries
South-West Atlantic	No information available	No information available	No information available
West Indian Ocean (Eastern African region)	No information available	No information available	No information available
West Pacific and East Indian Ocean (East Asian seas)	No information available	No information available	No information available

	Main land-based pollution sources	*Main sea-based pollution sources*	*Major uses of coastal areas*
Wider Caribbean region and South-East Pacific (Central America)	Domestic waste water and solid waste, pesticides from agriculture, heavy metals or due to mining activities	Oil spills, gas emissions, transportation of chemical substances, boating (fishing and tourism), shrimp farming	Major population centres along the coast, agriculture, tourism, aquaculture (shrimp farms)
Canada	No information available	No information available	Major cities
China	No information available	No information available	No information available
Russian Federation	No information available	No information available	Mining and oil exploitation
South Africa	Sewage, storm water run-off from urban areas industrial and sewage	Accidental oil spills, deliberate discharge oil, ballast water, plastics and other pollutants from ships and ship maintenance activities	Population centres, fishing, collection of inter-tidal organisms, beach and seine netting and agricultural practices, tourism, recreation and leisure, agriculture and mining
United States	No information available	No information available	No information available

V. Future challenges

111. Despite national, regional and international efforts and activities to promote sustainable development within oceans and seas, much remains to be done.

112. Weak coordination, implementation and monitoring of legislation, and lack of intersectoral coordination in many parts of the world are the main obstacles to full implementation of international agreements and commitments. It should also be noted that there are still areas where exploitation of marine resources is unorganized, national fishery policy is not clearly formulated and legislation for land use in coastal areas or fisheries management is totally non-existent.

113. Boxes 1-4 summarize the most acute and frequently repeated problems in the national reports to the Commission on oceans.

Box 1
Biggest concerns related to (integrated) coastal zone management

- Economic development and dense population, combined with scarce land resources, result in increased stress on the resources and affects the ecological balance of the coastal zone. The challenge is finding means to avoid the adverse effects of industries and human settlements on the coastal environment and to manage the conflicts that arise from competing uses of the coastal space, particularly in densely populated countries.
- Greater understanding is needed on ways to develop and especially implement integrated coastal zone management programmes.
- More emphasis is also needed to integrate all elements of sustainable development into coastal management and oceans policies.
- Monitoring and controls need to be put into place to frequent violations in disposal of toxic and hazardous waste in the catchment areas.
- Programmes need to be designed to enhance the conservation of biodiversity in coastal areas and rehabilitate degraded areas.

Box 2
Specific concerns related to climate change

- Interacting and drastic problems may result and have already resulted from global climate change. These include seal level rise, increasing frequency and strength of storms, hurricanes and floods, and their potential economic, environmental and social consequences, such as decreasing tourism, risks to daily lives of people and to human health, and increased erosion, levels of salt water intrusion and drought.
- Though efforts are under way, many small island States have admitted that plans for the adaptation to sea level rise are not available and there is no national funding for adaptation measures.

Box 3

Biggest concerns related to protection of marine environment

- Untreated or insufficiently treated waste water (from population centres, industrial effluents and irrigation drainage water) continue to pose a major problem.
- Despite the various international and regional agreements, marine pollution control and monitoring are still inadequate in many parts of the world, and thus oil spills and legal and illegal discharges of oil and wastes from vessels at sea continue. Further commitment and especially tougher inspection and control procedures are needed at the national level.
- Introduction of exotic species by ballast water from ships persists, often undetected.
- Eutrophication is increasing due to phosphate, nitrate and sediment loading of marine estuaries from intensive cultivation in catchment areas.

Box 4

Biggest problems in the conservation and sustainable use of marine living resources

- Fish stock continue to decrease, and many marine living resources are endangered.
- There appears to be a lack of political will to end overfishing and destructive fishing methods, recover depleted fish stocks and efficiently implement long-term sustainable development strategies for major fish stocks in many parts of the world.
- There are still major gaps concerning surveillance and monitoring of fisheries at sea.
- Coastal marine environments, especially fragile ecosystems, face threats due to increased marine aquaculture (fish and shrimp farms).
- Despite many international and national efforts, overexploitation of living coral sites and degradation of mangroves continues.

Notes

[1] See *Official Records of the Economic and Social Council, 1998, Supplement No. 9* (E/1996/29), chap. I.B.

[2] The Caspian Sea is excluded from the analysis since very little information on specific sustainability activities related to it has been provided to the Commission, and the national information of the countries that border the sea is analysed within other regions.

[3] Discussed individually because it borders more than one ocean or sea or is a member of more than one ocean programme.

[4] Including cooperation among Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

[5] Australia, China and the Republic of Korea also participate in the East Asian Action Plan, but Brunei Darussalam does not.

[6] Information from Fiji covers fisheries only.

[7] The PHARE programme is an EU initiative, which provides grant finance to the countries of Central and Eastern Europe in order to support them during the process of economic transformation and strengthening democracy.

[8] The TACIS programme is an EU initiative for the Commonwealth of Independent States (CIS). It aims to foster the development of economic and political links between the EU and these partner countries.

Annex

List of reporting countries

Countries that have provided information on oceans to the Commission	*Session(s) of Commission to which information on oceans is provided*		
	97	*98*	*99*
Albania	x		
Algeria	x		
Antigua and Barbuda		x	
Argentina	x		
Australia	x		
Austria[a]	x		
Bahamas	x	x	
Bahrain	x		
Bangladesh	x		
Barbados	x	x	
Belgium	x		x
Benin	x		
Brazil	x		
Brunei Darussalam			x
Bulgaria	x		
Cameroon	x		
Canada	x		
China	x		
Colombia	x		
Costa Rica	x		
Côte d'Ivoire	x		x
Croatia	x		
Cuba	x	x	x
Denmark	x		
Ecuador	x		x
Egypt	x		
Estonia			x
Fiji	x		
Finland	x		x
France	x		
Gambia		x	
Georgia			x
Germany	x		x
Greece	x		x
Guinea-Bissau	x		
Guyana	x		
Haiti	x		
Hungary[a]	x		
Iceland	x		

Countries that have provided information on oceans to the Commission	Session(s) of Commission to which information on oceans is provided		
	97	98	99
India	x		
Indonesia	x		
Ireland	x		
Israel	x		
Italy	x		
Jamaica		x	
Japan	x		x
Kazakhstan	x		
Lebanon	x		
Lithuania	x		x
Madagascar	x		
Mauritius	x		
Mexico	x		x
Monaco	x		x
Morocco	x		
Netherlands	x		
New Zealand	x		x
Nicaragua			x
Niger[a]	x		
Nigeria	x		
Norway	x		
Pakistan	x		
Panama	x		
Philippines	x		
Poland	x		
Portugal	x		
Qatar	x		
Republic of Korea	x		x
Romania	x		x
Russian Federation	x		x
Sao Tome and Principe	x		
Saudi Arabia	x		
Senegal	x		
Slovenia	x		
South Africa	x		x
Spain	x		
Sri Lanka	x		
Suriname	x		
Sweden	x		x
Switzerland[a]	x		
Syrian Arab Republic	x		
Thailand	x		
The former Yugoslav Republic of Macedonia[a]	x		

Countries that have provided information on oceans to the Commission	*Session(s) of Commission to which information on oceans is provided*		
	97	*98*	*99*
Tunisia	x		
Turkey	x		
Uganda[a]	x		
Ukraine	x		
United Kingdom		x	
United Republic of Tanzania	x		
United States	x		
Uzbekistan	x		
Venezuela	x		
Zimbabwe[a]	x		

[a] Landlocked.